Healthcare 3 (2015) 116–118

Contents lists available at ScienceDirect

Healthcare

journal homepage: www.elsevier.com/locate/hjdsi

Interview

Interview with Mark Graban, MS, MBA

Russ Kerbel, Khin-Kyemon Aung *

Beth-Israel Deaconess Medical Center, Department of Orthopaedic Surgery, 34097 Glen Drive, Eastlake, OH 44095, United States

ARTICLE INFO

Article history:
Received 20 March 2015
Accepted 20 March 2015

Mark Graban is author of the Shingo-Award winning book Lean Hospitals: Improving Quality, Patient Safety, and Employee Engagement. Mark is also co-author, with Joe Swartz, of Healthcare Kaizen: Engaging Front-Line Staff in Sustainable Continuous Improvements (also a Shingo recipient) and The Executive Guide to Healthcare Kaizen. He serves as a consultant to healthcare organizations through his company, Constancy, Inc and is also the vice president of customer success for the technology company KaiNexus. He has focused on healthcare improvement since 2005, after starting his career in industry at General Motors, Dell, and Honeywell. Mark has a B.S. in Industrial Engineering from Northwestern University and an MS in Mechanical Engineering and an MBA from the Massachusetts Institute of Technology's Leaders for Global Operations Program. Mark and his wife live in San Antonio, Texas. He is also the founder of www.LeanBlog.org.

Healthcare: Thinking about Healthcare Delivery Science, in the context of Ebola: What at both the local level and the national level, have you learned in these past few months?

Graban: I think there have been a lot of important questions being raised over the past few months—questions about the level of preparedness at hospitals, confusion about protocols, accusations about a lack of planning, lack of preparation, lack of training. That is all very troubling.

One cannot claim any care system provides perfect foresight to allow you to anticipate anything in a rapidly changing environment. However, what I think a Lean [Organization] would focus on, what I hope and expect a Lean hospital to be doing, would be having executive and clinical leaders that are looking ahead. That is a critical part of the executive's job.

We see many hospital systems, and their leaders, stereotypically fighting fires. They are in the weeds. They are reactive. However, in a Lean environment, leaders create a culture of continuous improvement. They have everybody working on day-to-day improvements. That frees up their time to be more strategic. That is one important way that Lean helps frame the role of leaders. Instead of being the ones with all of the answers, leaders take the broader view of looking forward.

In a Lean culture, we rely on expertise of the clinical leaders and medical experts to look toward what protocols, supplies and equipment we need to best support the staff. A Lean hospital is concerned with providing the best care to patients, but takes the responsibility and obligation to protect staff, physicians, and employees very seriously; of not putting anyone in a position where they have not been provided the gear they need, or for example, haven't been taught, how to take off soiled protective gear. So it certainly seems like there were elements of poor planning, poor training, and poor communication.

Healthcare: We heard that a suspected Ebola patient provided a social history to a nurse and which was miscommunicated to a physician. That hospital system used an electronic health record. As you know many of these electronic health records (EHR) are purchased and not in-house built. Therefore, internal processes must often be reverse engineered to try and fit the EHR. This concept appears to be opposite to Lean thinking. How does an organization make the best of that situation?

Graban: I have read commentary from Dr. Robert Wachter discussing how the use of electronic systems has increased the segregation between where nurses and doctors physically sit, thus hampering the traditional face-to-face communication. When you think about Lean principles; one of those is breaking down siloes and having cross-functional teams.

For example if you go visit Autoliv in Utah, where a lot of health care leaders have gone to learn about Lean, one of the things they have done is break down departmental silos and literally break down walls. So instead of having a materials department, a scheduling department and an engineering department, they create a cross-functional bullpen area that might remind you of a “nurses station” or a “nurse–physician workspace”. That seems to be the Lean direction in principle and very practical ways: break down siloes, communicate in formal and informal ways.

* Corresponding author. Tel.: +1 440 364 8872.
E-mail address: khinkyemonaung@gmail.com (K.-K. Aung).

http://dx.doi.org/10.1016/j.hjdsi.2015.03.004

In classic Lean thinking driven by Toyota, they sometimes get an unfair outdated rap about being opposed to technology. In the 1970s and 1980s, Toyota used very analog manual methods whereas a lot of the industry was really in love with electronic computer systems. Sometimes those systems were oversold and were pitched as a silver bullet. Today, Toyota has more of a middle ground view. They use technology where appropriate, but it has to be consistent with their workflows and has to support their people and processes. A Toyota factory tends to be less automated than a General Motors factory. They have robots, and use software, but they don't accept the fact that the software would make them magically more efficient. I think there have been some elements of this in health care.

I do think the rush, due to the federal government incentives, to quickly implement electronic medical records may have led to some problems where things were out-of-sync with workflows.

Healthcare: Let's discuss Lean in academic medical centers. In systems such as ThedaCare; a system without an internal Institutional Review Board, and few residents, they are able have complete participation in the Lean program, whereas some academic medical centers adopt Lean processes but have additional challenges when integrating medical education and research. How have you seen this play out over the country and has it changed over time?

Graban: Generally speaking, the fastest and most advanced progress with Lean in healthcare has typically come in smaller community hospitals. It seems the sweet spot is 200–400 bed hospitals. For example, Virginia Mason Medical Center is a 330-bed hospital. ThedaCare has two hospitals that are in the low 200-bed range, among other facilities. There is a size in which hospitals think they are too small and say they don't have the resources to have Lean training or to bring in a consultant. These are the barriers raised or excuses made of being too small. Then there are things at the other end of the spectrum. Some will say their organization is too big and it takes a longer time to change the culture. There are so many people involved. So many mindsets to shift.

I have, however, seen cases of really great progress in the academic medical centers such as University of Michigan Health System. There they have integration of their medical school and health system leadership. They try to build bridges to where Lean principles can be used to not just improve ancillary hospital operation or direct patient care, but can influence the medical education process. Dr. Jack Billi, has dual leadership roles in the medical school and the health system and has been one of their main Lean champions. There it is important not to just teach Lean to medical students and residents, but also use Lean thinking to improve rounding and education processes.

Healthcare: In the last 10–15 years have you seen changes in the Lean philosophy itself? Or do you feel you are still spreading the original concepts?

Graban: I think the principles are pretty solid and well defined within the literature of the Toyota Production System, Lean Manufacturing and Lean Healthcare. We all continue to learn through our own practice and our own study. Toyota continues to evolve. ThedaCare continues to evolve. Lean thinking is not completely static. What I think evolves more than the underlying principles are people's views from getting from here to there.

The easiest thing is to lay out an ideal state, vision or description of: "this is what a Lean organization would like and operate". But the million-dollar question is getting from here to there. There are different implementation or transformation strategies. Individuals, organizations, and the health care professional better understand Lean over time. I believe it is a similar progression to what we saw in manufacturing. Early on people gravitated to specific tools and tactics. It was about implementing those Lean practices.

Then [Lean] understanding tends to evolve so people realize that it is not just about tools, but it is about problem-solving methodology and frameworks for continuous improvement. Organizations might go do a number of Lean projects and weeklong Rapid Improvement Events and then realize "that's all been good and helpful, but we are not really engaging everybody every day." As a next step, healthcare organizations might layer, on top those tools and events, mechanisms and mindsets to encourage continuous improvement every day. This initiates a change in the culture so that people can point out problems without fear, so that they can engage and be listened to when they want to fix those problems. Beyond that there is a progression where people may realize: "this is not just about getting front-line staff involved, but about defining a different type of management system and a culture."

I believe there is a progression that organizations go through. You can't jump right in and say, "Well we are going to focus right on the culture." I think there are necessary steps and building blocks. I think maybe one could shortcut some of the earlier steps. If a hospital today were just starting with Lean, I would hope they would take phases one, two and three simultaneously with an eye for also needing to develop a Lean management system.

Healthcare: When thinking about elements of a Highly Reliable Organization, such as common culture, protocols, data collection, and accountability, we have seen a push at a national level for interoperability of systems, and incentivizing the uptake of EHRs. Do you believe there will a push to adopt, either using Lean terminology or another, a common culture nationally to improve collaboration between multiple institutions?

Graban: I think one thing I have learned over the last few years is the complementary nature of different programs and philosophies. Over the past fifteen years, the leaders of the modern safety movement have taught very similar things [to Lean]. As a Lean thinker it completely resonates when one hears the cultural aspects of: team-work, breaking down siloes, reducing fears, allowing people to point out problems, and not reacting in a blaming way.

Look at a methodology like "Crew Resource Management" that is brought from aviation. What they teach to surgeons and teams in the operating rooms about teamwork, communication, speaking up, breaking down hierarchies, having respect for everybody in the role that they play, sounds a lot like the Lean movement. But I believe the Patient Safety Movement adds additional thoughts and concepts that go beyond what Lean would bring on its own. Crew Resource Management brings ideas and concepts that build upon Lean. I also believe the "Just Culture" methodology is consistent with Lean but brings some additional concepts to the table.

My thought would be to try to look for some consistency in Lean terminology. I have had conversations with organizations about which terminology they should use. For example if we talk about Continuous Improvement, Toyota would call that "Kaizen", a Japanese word that some people may think their staff with uncomfortable with. Do they call it "Continuous Improvement Program" or do they call it an "Idea System"? There is something to be said about making people comfortable with terminology and localizing things.

However by doing this [having cultures with different terminologies], we run the risk of making it harder for people to conduct literature searches and find people to collaborate with. For example, we can refer to an initiative as Lean, or Operational Excellence, or Performance Excellence, or Process Improvement, or Continuous Quality Improvement. I think the bigger issue is not having our Lean blinders on and making sure we are integrating Lean concepts with other practices that are proven to help and come from other sources.

Healthcare: What do you see as the major hurdles for getting Lean more into the Academic Medical literature?

Graban: When I have been involved in publications, it has been more in the management journal side of health care. I know some physicians, those of whom typically published within a clinical journal, would like to publish [Lean projects] but the threshold of proof is different. As a Lean thinker, we tend to be experimental and to look at the PDSA (Plan, Do, Study, Adjust) cycle where we are looking at data and results but many times people will point and say we did not do a properly structured and controlled experiment. They ask: "Can you really prove a cause and effect between this Lean initiative and other factors that were going on?"

A study in Ontario looked at hospitals that were using specific, consistent, province-wide methodologies around Lean to improve emergency department flow, reduce waiting times and cross-functionally across the hospital. However at the same time, there were different province initiatives and incentives making it hard to make any improvement in isolation in what might be a purely research-driven, scientific way. The real world is messy and we are making changes while trying to gauge whether that was actually an improvement, was it measureable, and was it statistically significant? There, some researchers looked and said, "the hospitals that had a Lean program did not show any better improvement than the hospitals that were not doing Lean." So the researchers said the improvement must have been due to other factors. Critics say the evidence about Lean is anecdotal and self-reported and this creates barriers for people who want to publish in these journals.